

HOME Computing WEEKLY

Late start for CBS

CBS has moved into the UK software market with the release of a range of eight titles to retail join in time for Christmas.

The initial range will be available from the end of November, and run on the Commodore only. Both disc and cassette versions will be packaged in also sold items, with striking neon-style artwork.

The games are created by Ego, an American company which had a US hit with Summer Games, licensed by CBS to Chuck Davis. Steve Hyman, CBS software manager, Continued on page 3

M & S trial run

Along with underwater and weekly positions, you can now pack up a software pack from Martin and Syreeta in relaxed short sessions.

Efforts shape will be working a range of three packs, at 10.99 each. Each contains two cassette and comes complete with a notebook book giving you hints and tips on strategy for games, and instructions for version.

The project is trial run to test the market, and the initial range will be of three packages. Starting Program, written by Gwyneth Publishing, Games Pack from Visions and Silverdale, and Games Master by Quicksilver.

Continued on page 3

CBM 64 word quiz So you think you know it all?

Reviews for:
BBC, Electron, Oric,
Spectrum, CBM 64,
Amstrad CPC464

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CBM keyboard

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check

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Spectrum

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MacGibbon

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THE INDEPENDENT HOME-MICRO NEWSLETTER

★ Gossip and rumours

How often do you find more about what's doing what to whom, whom, pending success or failure. Also if you don't know what Sir Chris's nickname was at school or that the new President of Italy is called a New York article. The Home Micro News Page tells all.

★ BARGAINS

We are not a technical journal. BUT every month we give an 'insider's view' when the price you are paying you need to know about what's new, what's done, what's being a software crash. Plus, we offer our specialist customers on value and quality. Everything from complete computers to carrying cases is covered.

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More would you like to know a personal message from him such as most personally as Sir Chris Butler? Every month we send such people to visit our members go up their names and how they are the future of the home micro industry.

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M & S

From front page

the project is a success, we'll look at other machines."

The software is packaged in an open video style box, with slide photos from producing the cassette and book. The first three releases are designed for female gamers and to appeal to beginners as well as enthusiasts.

Start to Program enables you to experiment with diagrams, colours and graphics, with an adventure game which you can create. Fearless Frank and Frozen Program are the two arcade games which make up Games Pack, and the booklet accompanying the games gives you hints on how best to play the games.

Our cassette of Games Master contains eight sample games, which you can alter to your liking, while the second cassette is blank so that you can save the games you create. The 4-page guide is illustrated and is full colour.

Computer software is available from M&S and Spence at Millers, Birmingham; Bells Lanes, Cardiff; Corsons, Glasgow; Kappan, Leeds; Linnell, Manchester; Mace, Arch; Newcentric, Oxford; Oates, Reading and Powell, in other videos. Demonstrating success from the games will be on show at various branches.

CBS

From front page

regarded the fact that CBS had moved into the software market was late to release Summer Games in the UK.

"It's just part of those things," he said. "Otherwise we would have wanted to release Summer Games under our own label, but we weren't in a position to put it on the market place at this stage. But we were heavily involved with the game."

Commenting on CBS's late entry into the software market, Mr Hyams said: "We think it's better to make a release before Christmas than not at all," he said. "Having this from the money list at a position was made by CBS Software with CBS Records for us to move to in the market was fine, but we weren't asked to look at the situation until September."

The first eight games will be followed by monthly releases, according to Mr Hyams. The company has two American sources of software: Kyra and CBS Software, which has

brought out a number of educational games, some based around characters such as the Sesame St gang.

"We would like to attract our releases," said Mr Hyams. "We will be releasing Kyra games over months, then educational novelty games the next."

CBS will be studying the success of each game, and then making a decision on the one year which games to convert for Spectrum and BBC. "We'd be delighted to release on the Spectrum," said Mr Hyams. "It really depends on how well each game does. Impossible Mission is attracting a lot of attention, so of course we'll be pleased if it's a hit. We think all these games are good."

Impossible Mission involves you as Agent 005. Your mission is to reach the control centre of a mad scientist, who is threatening the world with nuclear annihilation. Human-sitting robots endanger your life and your team sometimes over time.

Other titles include Bush demo, Po Sapp, Triumph of Aphrodite, Sahara Warrior, Hammer, Laser Shapes and Disintegrator of Pain.

CBS Software, Ashford Rd, Barking, Essex, London W1

Castle of adventure

Castle Blackart is the name of CDS's latest adventure, licensed from SCR Adventures. Available for the Spectrum and Dragon, with BBC, Commodore and Amstrad versions to follow, the game is the first part of a trilogy, The Arctura Quest.

You are commanded by the golden Arctura to return an important orb and you must locate it in the castle dungeons. This is a text-only adventure, and you have more than 250 words in your vocabulary.

Price £6.95

CDS, Silver Box, Silver St, Doncaster, S Yorks DN1 1HL

Ocean — TV stars

Ocean, based in Manchester, has announced a documentary to be shown on BBC2 on December 10th, at 8 p.m. The series Commercial Breaks has been following the progress of commercialism in various fields.

In May the documentary team began work on tonight, the Liverpool software house

which collected the various Arctura, was revealed to Ocean and the programming and production of Blackart II.

While the documentary was being filmed, Ocean acquired a large number of licences, and the series looking up to this acquisition can be seen on Commercial Breaks.

The new one can have a computer game made and marketed, and eventually arrive on the shelves.

Vampire killer

Track down Dracula and destroy him, using the traditional means, in Vampire Killer from Scorpio Gamesworld.

At £1.95, the arcade adventure is available for Spectrum and Amstrad. Scorpio Gamesworld promises that if you succeed at the top level of difficulty, and answer four questions correctly, you could win £100-worth of software.

Scorpio Gamesworld, 307-311 Core Exchange Bldg, Colindale St, Manchester 4

Wall St shuffle

Kame has released a simulation game of the stock market on the Commodore 64. You must pay attention to the news items regarding company shares, and you can take advantage of buys and sells — although not all are

reliable.

This is your chance to make your fortune — or go to an early grave — but take heed to both dividends and debits. If you're normally bullish you can avoid income tax, but don't make too much money, since capital tax is crippling.

One or four players can participate and the game costs £5.95. Jon Day, sales manager, said: "Commodore owners will find this challenging simulation game a refreshing change from the normal top-down arcade games. Don't we say an ideal Xmas present for the would-be investor?"

Kame, 12 Abercrombie Ave, Plymouth, Devon PL4 7LH

Plug it in

Here's an expensive alternative to the computer or games plug. The Plug from Power International. At £17.95, it's considerably cheaper than the usual version, but Power claims it eliminates electrical frays — small power surges and spikes — instantly.

Less or no surge due to resistance in power will become a thing of the past, according to Power, and the company promises that The Plug will secure Christmas space of good will really does prove.

Power International, 2a Broadford Mount Rd, Portsmouth, Hants PO4 2BX



The Plug from Power International

I spy

You are a British agent on a mission Germany, in 1942 Mission by CCS. You must penetrate a camp and steal the plans, which are kept in a strong safe. Schmidt, a German guard, will help you, as he is a double agent.

This adventure game features several war-time topics and there are special verbs. If your strategy fails, take notes on your contact go on.

MSX Mission costs £5.95 and runs on the Spectrum.

CCS, 14 Lonsdale Way, Black-
Rock, London SE1 7TA.

Crib from cards

Are you fed up with having to think back to your computer manual whenever you need to know some detail for programming? For £2.99 per card you can now buy Computer Crib Cards, from Phoenix.

Compatible 64, Spectrum, BBC, and Electron cards are available. Topics like keywords, operating commands, graphic and sound commands are included, to name but a few.

The cards are reported to be made of sturdy plastic and which will not spring shut in the crucial moment, and each card comes in a polystyrene sleeve.

Phoenix Publishing, 14 Pinner
RD, Ruislip, Middx WD9 2AL.

Micro break- down

The publisher of most computers will be waiting soon, if it hasn't already. Then you're faced with the problem of who will mend your computer when it breaks down, and more still, how much it will cost.

Computerfix, of Clusdoby, has established a network of 700 dealers. From the first box hand your micro over the counter to one of the specialist dealers. Computerfix guarantees that your computer will be mended in 48 hours, plus the postage time from your dealer to Clusdoby and back.

Speedy repairs can be entered thanks to ACUMEN, Advanced Computer Memory Tester, which can diagnose faults in any of the 10 best-selling home computers in "five seconds" according to Computerfix. And the company claims that the ACUMEN machine would only cost £5,000 if sold — 3 per

cent of the cost of existing advanced test equipment.

Managing Director Ray Johnson explained that in taking a skilled computer engineer half a day to look down a small fault in a circuit. "The answer had to be largely to take the skilled computer engineer out of the regular process for cheap computers and replace him with a cheap computer!" he said.

He continued, "Home computers could well have become disposable items of technology like vacuum — not worth repairing but too expensive to throw away."

Repair prices start at £15.50 including parts, postage, trouble shooting and 90-day money back guarantee and labour. Look in a store yellow pages telephone directory under the classification Computers — Miss and Mrs, and you should find Computerfix dealers there.

Computerfix, Albany RD, En-
field, Middx EN3 6JL.

Robot Plotter

Phoenix has launched "the unique robot plotter". It's a three-colour plotter with a built-in character set, which can cope with any size of paper. According to Phoenix, it can draw perfect circles and straight lines in any direction and is reported to be less than half the cost of its nearest rival.

As well as being an accurate plotter, Phoenix claims it is a

high resolution printer, fast-
type fonts, precision raster with variable feedback to screen
classroom, and it can also
function as a monitor.

The unit can be connected to
almost any computer with an
RS232C interface and it costs
£115 plus VAT.

Phoenix, 4 Woodwood Close,
Gerrards Way, Watling, 4
Seven EN14 5DP.

Adventure helpline

If you're an adventure player
your life could be made easier
by Adventure Planner from
Preston Plotter. It's a 54-page
planning pad, A4 size, which
enables you to plan your game
and keep a record of your
adventures.

Each page contains a map-
ping system with over 150
locations. You are provided
with examples and hints and
tips on how to use the planner
to its best advantage.
Price £3.95.

Preston Plotter, 16 Barnham
High St, London SE1 8EE.

Trio for Amstrad

Thereby is the name of a new
software house which has
released three games for the
Amstrad CPC/MSX Spectrum,
The Royal Quest and The
Moon Challenge cost £6.95

each.

Enthused is promised as
being "no original or daring
description." What you must do
is memorise one of a number
of talking points over a playing
field to form a word in each
direction which the robot must
move and more empty points
are left, and the game is reported
to be frustrating, difficult but
addictive.

In The Royal Quest anything
can happen, according to Ture-
day. You control your guide to
find the King of Great's magic
grimoire. This is an early adventure
in said to be target to cheer and
you must have your wits about
you.

The Moon Challenge is an
Orlando-style program played on
an 8 x 8 board. Five skill levels
and a three star feature.

Timings, The Old Primary
School, Main St, Barnham,
W London EN9 5PA.

Learn with Mr Men

"Mr Men make learning fun for
children," so says the promotion
for Mirrorsoft's latest launch,
Word Games with the Mr Men.

This is a double-camera pack
of word games, recommended
for children in the five to eight-
year range. There are two main
programs: the first teaches
opposites, comparative and
superlatives, while the second
demonstrates words such as on,
at and next to, with animated



Phoenix three-colour robot plotter

£169

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25-34	22%	20%	24%	18%	22%
35-44	18%	16%	20%	14%	18%
45-54	12%	10%	14%	8%	12%
55-64	8%	6%	10%	4%	8%
65+	4%	2%	6%	1%	4%

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Argus Press Software

Awesome in its conception

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Dynamic in its execution

The world you are about to enter bears no resemblance to any arena you ever encountered before. Weapons are of no avail in this small habitat.

The only sources of protection at your disposal are quick wits and fast reflexes. The only reward is to survive against creatures of unbelievable ferocity and cunning, and to avoid hazards more perilous and deadly than any you might find on a trip through the outer universe. This is the real world, populated by the creatures of our own inner universe, where nature is red in tooth and claw. Brace yourself now, and come with Starcade into the still water and deceptive calm of the SAVAGE POND.

COMMODORE, ATARI, SBC/ELECTRON (£8.95 each)

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SBC (£10.95 each)



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sequel.

Wright Software designed the game, and a keyboard overlay and instruction booklet is included in the package price of £19.95. Available for the Spectrum.

Microcos/E, Melrose Court, London EC1P 1JG

School romp

Shedhead, from Microplanet, is "a fast action romp through your youth." Running on the Spectrum, it features stereotypical school characters, like the bully who violently mauls you on the head, the apple-looking teacher who will get you with his cane, and the rascally prefect who knows all the secrets.

Scavenger, also from Microplanet, is a 3D shoot-'em-up game which the company plans will make the winner of about 100m look a little pedestrian to say the least. Fly through the city to defeat the *Wishers*. Final view from the cockpit will show you what it really looks like.

Both run on the Spectrum and cost £1.95.

Microplanet, 77 Bowbery Rd, London NW10 1LA

Briefly

Now on the Amstrad CPC484 *War Zone*, from CCS. You play against the computer and you can have from 15 to 150 yards of military, tanks and artillery. Price: £1.95.

CCS, 14 Lonsdale Way, Blackheath, London SE15 7FL

The Kai Trilogy, from Interactive, is now available in a gift pack. *The Mysteries of Kai*, *The Temple of Yinn* and *The Final Mission* will cost £12.95 in the provinces (ie, a saving of £1.25 on the individual price).

Interactive, 41 London St, Reading RG1 1AB

Wally Week, one of *Pyromaniacs*, can now be seen on Commodore 64 and Amstrad CPC484.

Price: 7.95.

Atari-Corn, 41 The Broadway, Boreham, Boreham, Essex



Paul Clancy, face to face with the Alien

Alien strikes back

After Ghostbusters — the game of the film — from *Apogee*, here's *Alien*, from *Apogee Press Software*, in the *Mind Games* range.

Twentieth Century Fox has licensed the game, and it's available on the Commodore 64 for starters. Spectrum version will follow in early December. At £1.99 the package includes a 16-page booklet with stats from the film, and a guide.

Paul Clancy, programmer, worked on the project for several months and is featured by the film.

Alien — the game — is one of speed and strategy. "It sets new standards in strategic gameplay," according to *Peter Holmes of Mind Games*.

Apogee Press Software, No 1 Grafton Square, London W1R 1AB

HOME
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WILDEST DREAMS

Software Rental

Just a couple of questions for the computer gamer

1. When did you buy your last computer game?
2. How often have you played it?



Buying software can seem a pretty bad deal when you pay £9.99 for only a couple of hours play.

Well, now you can visit the Circus, help King Clive in his dungeon, beat the computer on your Laser Byke, explore deep space, set your way through a cheese washhouse and get totally infuriated by the Marshall, all for less than the price of one new cassette.

How? well, if you go down to your Video dealer today, you're in for a big surprise. He can hire you a Wildest Dream rental cassette for your Spectrum or Commodore 64, featuring one of these games, at a very reasonable price (say about one tenth the price of a good recent game ...)

And it's not somebody else's old stock were trying to lure you. These are all brand new games that you've never seen before in the shops - and you won't see them in the shops later.

Only through your local Video dealer can you hire Wildest Dreams rental software.



CONTACT:- Chris Kilburn
WILDEST DREAMS
P.O. BOX 84,
COVENTRY.
Tel: (0203) 663085

5 PROGRAM

```

1000 program Pisher
2000 by Silvio Sutoro
300
400 print "Pisher times 1
500 issue DEFEND issue WINST
600 let SC=0;let LI=3
700 clatter MH=10;let MV=2;let TM=nd(Copies) DEAD=0
800 let D=seek(67020)
900 if D=34 then let MX=MX-(M<30)
1000 if D=33 then let MX=MX-(M<M?)
1100 if D=7 then let MV=MV-1;if MV=1 then let MV=23
1200 loc 2 to MV=0,MV+0
1300 print cursor(40,13),D;clear(234);"M"
1400 let PE=vseek(63000)+MV+32=(M?vseek(63000)+MV+32)+(H+1)+vseek(63000)+MV+32+(H+32)=vseek(63000)+MV+32+(H+33)
1500 if PE>253 then issue #PIE
1600 let TH=TH+vseek(2)-1
1700 if TH>30 then let TH=0 else if TH<0 then let TH=30
1800 loc 1 to TH=0,24
1900 let TX=MX or TH=MX-1 or TH=MX+1 and MV<0 then vseek 65000
2000
2100 if not DEAD then goto 85 else issue SEND
2200 goto 60
2300 SCOPE
2350 loc 1 to 300,300;loc 2 to 300,300;out 620,177
2400 for D=164 to 191
2500 out 620,D
2600 loc 3 to TH=0,24
2700 for D=0 to 30;next
2800 loc 3 to TH=0,24
2900 for D=0 to 30;next D
3000 next
3100 let SC=SC+100
3200 loc 2 to 300,300;loc 3 to 300,300
3300 clatter MH=10;let MV=2
3400 return
3500 END
3600 out 620,6FF;out 620,6FF;out 620,6E4;out 620,6FB
3700 loc 2 to MX=0,MV=0;let 2 to 300,300
3800 for D=0 to 1000;next;loc 2 to 300,300
3900 out 620,6E7
4000 for D=6FB to 6FF;out 620,D
4100 for D=0 to 30;next D;next 5
4200 loc 3 to 300,300
4300 let LI=LI-1;if LI=0 then let DEAD=1
4400 clatter MH=10;let MV=2
4500 return
4600 END
4700 print cursor(0,10);"A H E O U R"
4800 print cursor(0,12);"Your score was "ISC
4900 if SC>HI then let HI=SC
5000 print cursor(0,14);"High score is "HI
5100 print cursor(0,17);"Press R to replay"
5200 let A=peek(81);if A<>"R" and A<>"r" then goto 520
5300 repeat
5400 $FINE
5500 strchr "0014ic143e7f63" to 250,0
5600 strchr "a42d7cd6b5ee04e" to 251,0
5700 strchr "2013b05be14320e" to 252,0
5800 strchr "ea2a9dbel1bcb30e" to 253,0
5900 for i=1 to 3
6000 strchr "002a2a003ee4f73e" to 254,i
6100 next
6200 word 0,250;word 1,251;word 2,252;word 3,253
6300 word 0,13;word 1,0;word 2,6;word 3,7

```

ASTEROID FIGHTER

```
640 let HT=100  
650 return  
660 INET  
670 let XO=100:let YI=100:let ID:=1:let IT=1  
680 goto 670A:  
690 Print "  
700 Print "ASTEROID  
710 Print "  
720 Print "  
730 Print "  
740 Print "  
750 Print "  
760 Print "  
770 Print "  
780 Print tab(7)*10;"over the top of the sky"  
790 Print tab(7)*10;"Shingo Sugiura"  
800 Print tab(13)"SPACE"  
810 Print tab(15)"+"  
820 Print tab(7)*8;" "+"  
830 Print tab(5)+"Press 2 to start"  
840 let AH=tabkey  
850 if HT>250 then let IT=-1 else if HT<5 then let IT=  
860 if XO>350 then let IO=-1 else if XO<5 then let IO=  
870 let XO=XO+IO:let YI=YI-IT  
880 let XT=XT+IT:loc @ to XY:100  
890 if AH<>"x" and AH<>"S" then goto 840  
900 delay
```

WFO-94 CRICKET Baseball glove of leather skin and laces. Ball is cast laterally with full overhand and is the major form of cricket currently in play. Padded glove save technique.

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David Rees
invites you to
study all the
potential of the
Commodore 64
keyboard. You
can control
speed and alter
the keyboard
memory —
read on for
details

One of the points made when people read the review of the Commodore 64 is its keyboard. The keys are sculptured to the fingers' shape, are well balanced, spring, and of just the right massiveness. However, no one seems to mention their performance as far as software is concerned. Which can be the barrier of silence is about to be broken!

The Commodore keyboard has many potential, the only problem being that the basic timing required, the longer the program needed to produce a line of the screen efforts to produce a key repeat. The location of the key repeat register is at byte 600, and it is normally set to zero. However, by POKEing it with some of the key repeats, and 128 makes all the keys repeat.

The other key repeat feature which can be controlled is speed. Location 601 controls how long the computer waits between the time you start pressing the key and the time when it starts repeating. POKEing this produces a rough aim, while one produces the longest delay. The only disadvantage is that the register with your value is in a one shot mode, so once your delay has been used up, the register returns to its original value.

The second way to influence repeat speed is to change the delay before each interrupt (between 1000 and 100). By POKEing location 96325 with a value between 50 (fast) and 255 (slow), you can vary speed to a large extent. However, a fast cursor slows down a BASIC program, so the best use for this is on edit only.

One of the annoying things I find when using a keyboard is typing in many letters and discovering that only a few have actually been displayed. The opposite occurs when a new display is started by a group of letters appearing when you have

Take a close look at your keyboard

been keeping them in slowly. The owner of this apparatus is the keyboard buffer. That stores keys when the computer is doing something else. However, as it is set it can only remember 39 keys, so either it forgets what you typed, or it remembers too much!

Luckily, a cure is at hand, in the form of location 649. This contains the maximum buffer length and can easily be varied between one (single key entry) and 15. However, caution is needed, as making the buffer too long creates unnecessary memory locations, so go beyond 15 at your peril.

My final tip about the Commodore keyboard will probably be the most useless:

ing, as it has wide applications. Many expensive computers have what is called Multiple Key Release. This means you can press several keys at once, and the computer will remember them all. The Commodore manual says you can only obtain one key at a time on the 64, but with a little lateral POKEing many effects are possible.

Using any method, the keyboard can be split into eight sections, each containing two columns of keys. Each bit in location 96322 represents a pair of key columns (with some exceptions) you will be able to find which bits control which keys and the keys will only be received if they fit in to

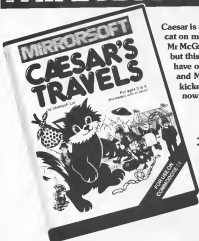
them, by sending in each bit in turn and getting a yes, right answer key will be received. The following line will allow you to do this (N = key row).

```
POKE 96322,2 & .325  
65428 GET AS POKE  
96322,255
```

Always use POKE 96322,255 at the end, otherwise the keyboard will become almost useless, receiving only a few keys, and you won't be able to start or stop anything. However, when the machine does run correctly it is invaluable. Fast typing is made much easier, but at biggest use is in games, where you can leave up to eight people playing at the same time!



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Touchmaster E149.95

Touchmaster, Part Laptop &
Cable \$419.95

Although the review is also available on the BBC system at the moment, it is also available for the Dragon, Commodore 64, VIC 65 and Spectrum computers, each needing a different interface but using the same touch pad.

The method used to input information to a computer is often seen as a problem for the user now. The touch is always on so find new and popular methods of using the method when to do. The use of a graphic tablet is one alternative and that is what this product package represents. The box contains all you require to get the system up and working whilst remains at a price you, that the pleasure of the tablet supplied inside this fairly simple. There are two leads to be connected, one to the computer and another to the power pack supplied.

The pad itself is a grey plastic box 11 by 14 inches with a plastic membrane at the centre of 44 centimetres. This means you can produce a drawing of colour on it on a sheet of paper (available at the Locom). With the pad under the lead, a pen/brush, two handwriting books, a software manual and an order form for more software. The software supplied is a drawing program and allows you to draw lines and on the screen, but none of the text.

When you have the unit connected there is a short listing for each of the functions which will allow you to find the basic use of the system and a set of co-ordinates values. This was where the first disappointment came to light.

Draw and design by touch

Touchmaster is a new graphic tablet for use with your home computer. We review its capabilities for you

simple, all you need do is change the colour of the value entered on the 4 unit so that the value can then go up to 1280. If you do for you get a much more serious result on screen.

The design of Touchmaster is interesting, but not as free than manufacturers in my view. For a start it is the tablet you don't have to touch the pad so much as push on it to get a response. This is a real drawback and stopped me, and my, from achieving the results that I wanted, most of the reasons of pressure needed to get a result was for me high. Another problem is that drawing you quickly, as you need to do



Seven Steps to the Touchmaster

change the colour to any of the ones available on the BBC, but there is only one defined as a unit and there is no input colour/output colour conversion possible. This means that any colour from a background colour change after you have started drawing and then it is difficult to set up a screen for maximum effect. The colour drawing leaves a line in the screen, looks slightly out of focus and can be difficult to see.

There is the chance to change the brush type and size and this can give attractive effects. Unfortunately, however, there is no memory facility, making that a major task in itself. Screen memory is stored as a section of memory, as the BBC's can hold 10K, and there is no refreshing software either. This cannot be input to a greater tablet using a frame and then using another drawing package and there is no option to draw a screen on a screen. As I said in the beginning of this paragraph, this is a very basic program.

I must admit the documentation supplied. The two booklets are accordingly

produced, but contain no real hard information about the product or how to use or usage in your own program. It isn't difficult and it managed to have it working as a means of example but it would have been nice to have had some technical information supplied. As the booklets are, they are really lacking. Another problem is the nature of the unit and it seems by default changes of colour in one unit are caused by a dependence on its perfect. This works very well when you press in one place in the same time when it shows the value so being half way between the two depends. This is not likely to cause problems for most users, but made me to find it more pleasant or to be disappointed.

Overall, I find it difficult to see how this pad can be used as a serious and productive way and I cannot really see anyone paying £149 for a toy. It may be that the Touchmaster which you can order will make it more viable in proportion to a range of similar, but I will need some convincing that it is going to be worth the money. D.C.



Touchmaster — play by touch

The BBC listing gave an indication of up to 1024 on each area. This means that a pad with an ability where you're viewing values which only control part of the screen and which limited the pad as if it were infinite. If you draw instead the same length as lines, even they would be different lengths on the screen. This is not what you want when I feel, and the remedy is quite

anyway common, means that the values are not drawn quickly enough and either blank or simple lines with the same. Another is just and using the highest resolution mode it is possible to define 256 points in each direction.

The software provided is a new basic drawing package which I cannot really recommend for most use. It is possible to

Colibre 48K Spectrum £5.75

Shards, Sany G, Reynolds Ltd,
15 London Rd, Barking, Essex

The plot for this one is obvious: a roughly 3000 year-old knight lives in the early days of the Christian era during the reign of the Emperor Florian.

After the mandatory high resolution screen picture, the main program loads, and you're off in a jiffy, with a mission in hand. I found the game absolutely first class in my lack of knowledge of the language. Every time I used the HELP facility, I was directed to an appropriate screen in the Bible (sorry, sorry, I was wrong) a built-in encyclopedia, helpful hints on the 48K/AS key and supplementary given and revealing

the listing of the left-hand eye. It's a competent programming effort, but I found it boring and lacking in excitement. Imagine me: off to work and I'm supposed to play an idle, or at least, two-way, imaginary game.

On the whole, the plot was a refreshing change and I feel that the program could well find application as an educational aid in religious instruction classes. I'm not sure that it would find favour elsewhere.

MB

entertainment 90%
playability 90%
graphics 90%
value for money 90%

★ ★ ★

Chartbuster CRM 64 £9.95

Allegro, 1 Orange St, Sheffield
S1 4JH

I have often wondered what software houses do with their products when sales are all that I know. They have not a computer.

Two packages remain: the game *Allegro*, *Single Empire*, *Single Wars*, *Planet Planet* and *Baghdat*.

Allegro is a truly graphical adventure of very good quality which is good for many hours of enjoyment. *Single Wars* is more hours and involves flying about a cave system, shooting, high balls, fish, chocolate, ducks and other weird creatures. The first seems a nice and gentle, but the rest are appalling really — good fun.

Single Empire is a version of *Planet* and *Planet* is a version of *Planet*. *Baghdat* is a version of *Allegro*, and *Single Wars*. There is a wide range of strange creatures in *Allegro*.

All games are well designed and are of a good standard. I did note that the usual poor *Allegro* duplication has been made the other loaded well. The games performed well.

Overall an interesting, short-term, which is a good compromise, very well with the budget game editor.

MB

entertainment 90%
playability 90%
graphics 90%
value for money 90%

★ ★ ★ ★ ★

Return to Eden CRM 64 £9.95

Level 9 Computer, 209
High Street, B1, High Wycombe,
Bucks

As an adventure fan, I viewed the prospect of reviewing the latest Level 9 game with excitement. This particular game was one of a number of games in the *Level 9* adventure series which were designed to be played on the Spectrum. The game is a very good one, and I found it very enjoyable. The game is a very good one, and I found it very enjoyable.

The game follows on from *Return to Eden* and follows you after you have been rescued from the *Level 9* adventure series. The game is a very good one, and I found it very enjoyable. The game is a very good one, and I found it very enjoyable.

The game is a very good one, and I found it very enjoyable. The game is a very good one, and I found it very enjoyable. The game is a very good one, and I found it very enjoyable.

Overall, excellent value for money, and I found it very enjoyable. The game is a very good one, and I found it very enjoyable.

entertainment 90%
playability 90%
graphics 90%
value for money 90%

★ ★ ★ ★ ★

Amazing adventures

This selection of our
adventure software has been
checked over for you by our
panel of expert reviewers

Cave Fighter CRM 64 £6.99

Shards, Sany G, Reynolds Ltd,
15 London Rd, Barking, Essex

You shouldn't have much trouble in getting this one as a graphical adventure in which you control a cave fighter. The game is a very good one, and I found it very enjoyable. The game is a very good one, and I found it very enjoyable.

Overall, excellent value for money, and I found it very enjoyable. The game is a very good one, and I found it very enjoyable.

entertainment 90%

The game is a very good one, and I found it very enjoyable. The game is a very good one, and I found it very enjoyable.

Overall, excellent value for money, and I found it very enjoyable. The game is a very good one, and I found it very enjoyable.

MB

entertainment 90%
playability 90%
graphics 90%
value for money 90%

★ ★ ★

The Pettigrew Chronicles 48K Spectrum £9.95

Shards, Sany G, Reynolds Ltd,
15 London Rd, Barking, Essex

Before you start in the game, I should explain that the game is a very good one, and I found it very enjoyable. The game is a very good one, and I found it very enjoyable.

The game is a very good one, and I found it very enjoyable. The game is a very good one, and I found it very enjoyable.

Overall, excellent value for money, and I found it very enjoyable. The game is a very good one, and I found it very enjoyable.

entertainment 90%
playability 90%
graphics 90%
value for money 90%

★ ★ ★ ★ ★

ZX81 PROGRAMMING

Dual purpose routine for the ZX81

Here's a useful little routine for the ZX81 by Nick Godwin. Use it to delete blocks of lines and at the same time, it will act as a line merge

The original title of this routine was Block Delete, since it was conceived as a means of deleting a large number of lines from a program as one goes. However, it could also be used to Last Merge, since this is what it actually does!

The program works by changing the record of line-lengths stored in a list, specified at 27, so that it includes what line and all subsequent lines up to and including the last specified as X1. The bottom of the first page of Chapter 17 of the ZX81 Manual describes the way a BASIC line is organised

To operate the routine, RUN the GOTO 9979 and enter the number of the first line, followed by the number of the last line of the set of lines that you wish to merge together. Lines 9980 to 9994 find the address of the start of the line list, which is assigned to 70. 9980 to 9987 find the address of the end of the line list, and that is assigned to 82. 9988-92 merge N - the total number of lines from the beginning of the first line to the end of the last line. 9993-94 POKE the new 'length' into the record of line-lengths following the first line number

The computer then 'thinks' that the first line ended at the end of the last line.

That means that if the first line is then deleted, it takes all the specified subsequent lines with it. Alternatively, the sequential set of lines can be POKE'd with, say, a full stop

(CHRS 27) apart from the first character, which should be POKE'd with CHR\$(20000) 134). This makes a long REM statement which can then be used to hold machine-code. This can be achieved using the following routine

```
100 FOR J=X1+2 TO X2-1
110 POKE J,27
120 NEXT J
999 STOP
```

```
9979 INPUT X1
9980 INPUT X2
9981 LET X=99999
9982 GOSUB 9988
9983 IF X2=X1 THEN GOTO 9995
9984 GOSUB 9988
9985 LET X=X2
9986 GOSUB 9988
9987 IF X=X2 THEN GOTO 9995
9988 GOSUB 9988
9989 GOTO 9995
9990 LET X=X1-1
9991 LET X=X1+2
9992 LET X=X2-1
9993 POKE X,INT (X-999)
9994 POKE X-1,X-999+PEEK X
9995 STOP
9996 LET X=PEEK X+999+PEEK (X+1)
9997 RETURN
9998 LET X=X+PEEK (X+2)+999+PEEK (X+3)+4
9999 RETURN
```

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Foolproof input check

Programs sometimes crash when you press the wrong key at input. David Nowotnik, HCW regular writer, shows you what to do to prevent this problem



One message in many of the various application programs I receive is from HCW in the form of a check routine in numeric input. Looking at the listings of these programs, the lines which request a number are usually just INPUT x (or another variable). If, by mistake, a key other than a number or a minus sign is entered in the first character of that number, then on pressing ENTER, the program will crash with the error message "Variable not found". Good programs should not crash so easily. The way to avoid this is to incorporate a routine to check that all the entered characters are valid.

An example of this is given in the program lines below.

```
100 INPUT x$ LINE
110 IF x$="" THEN GOTO 100
120 FOR i=1 TO LEN x$
130 IF x$(i) <> "0" OR x$(i) <> "-" THEN GOTO 100
140 NEXT i
```

In line 110, you are asking for a string input. The LINE function removes the quotation marks from either side of the leading cursor giving the appearance that a numeric input is required. Provided that you have not simply pressed ENTER, line 110, the string is checked to see if all the

characters lie between 0 and 9. If any fall outside this range, line 130 causes you to the input request.

You could alter this to print an error message on the screen (this would make the routine more user-friendly) before returning to the input request. Quite recently confirmed that the input is valid, then the VAL function can be used to convert the string x\$ to the required numeric variable, e.g. LET x = VAL x\$.

This routine will only allow the entry of a positive, integer number (or zero). The check routine will have to be more elaborate if you wish to check for an initial plus or minus sign, or check for a decimal point if you wish to enter more complex numbers.

If a plus or minus sign is entered then it must appear as the first character to be valid. Therefore, a line to check for this could be:

```
135 IF i=1 AND x$(i)="-" OR x$(i)="/" AND LEN x$ THEN GOTO 140
```

The length of string check in this line is required otherwise entry of just "-" or "/" would be valid.

A decimal number could either contain one decimal point, or no decimal point (if the number entered happens to

be integer). If you want to check for decimal numbers, the most convenient way is to incorporate a routine, which will count the number of decimal points found in the check routine before doing the entered string. If the count exceeds one, then the entry is invalid.

Here are some program lines which can be added to the original check routine (lines 110 to 130) to give a complete numeric input check:

```
105 LET p=0
127 IF x$(i)="/" THEN LET
```

```
p=p+1, GOTO 140
130 IF p > 1 THEN GOTO 100
```

This routine is best employed as a subroutine to allow all numeric input requests to be checked. You could improve the routine by adding some user-friendly messages to tell the user that his input is accepted.

The routine is written for the Spectrum, but should work on the ZX81, apart from line 127 in which there are two statements, which must be separated for the ZX81.



COMMODORE 64 PROGRAM

Word Quiz

So you think you know the English language? This word test by George Sykes will check how well you know the definitions of certain words.

Use this program to improve all your knowledge of English and, hopefully, improve your vocabulary at the same time.

It's a word game with an educational flavour in which the computer gives you a word and a list of four possible definitions. You must choose the correct one and type it in your answer.

After you have done several, the computer will give you a final score and the correct answers so that you can get a new good for each word. English vocabulary is a big job.

Words

1. **quadruple**
2. **quadruple**
3. **quadruple**
4. **quadruple**
5. **quadruple**
6. **quadruple**
7. **quadruple**
8. **quadruple**
9. **quadruple**
10. **quadruple**
11. **quadruple**
12. **quadruple**
13. **quadruple**
14. **quadruple**
15. **quadruple**
16. **quadruple**
17. **quadruple**
18. **quadruple**
19. **quadruple**
20. **quadruple**

Words

1. **quadruple**
2. **quadruple**
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18. **quadruple**
19. **quadruple**
20. **quadruple**

Use this program to improve all your knowledge of English and, hopefully, improve your vocabulary at the same time.

After you have done several, the computer will give you a final score and the correct answers so that you can get a new good for each word. English vocabulary is a big job.

quadruple (adj.) 1. consisting of four parts or groups. 2. (of a number) being four times as great as. 3. (of a number) being four times as great as. 4. (of a number) being four times as great as. 5. (of a number) being four times as great as. 6. (of a number) being four times as great as. 7. (of a number) being four times as great as. 8. (of a number) being four times as great as. 9. (of a number) being four times as great as. 10. (of a number) being four times as great as. 11. (of a number) being four times as great as. 12. (of a number) being four times as great as. 13. (of a number) being four times as great as. 14. (of a number) being four times as great as. 15. (of a number) being four times as great as. 16. (of a number) being four times as great as. 17. (of a number) being four times as great as. 18. (of a number) being four times as great as. 19. (of a number) being four times as great as. 20. (of a number) being four times as great as.

[illegible]

[illegible][illegible]

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6. The Spanish Tutor	£4.95	16. The Spanish Tutor	£4.95
7. The Spanish Tutor	£4.95	17. The Spanish Tutor	£4.95
8. The Spanish Tutor	£4.95	18. The Spanish Tutor	£4.95
9. The Spanish Tutor	£4.95	19. The Spanish Tutor	£4.95
10. The Spanish Tutor	£4.95	20. The Spanish Tutor	£4.95

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LA LANGUE FRANÇAISE
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ZX81 PROGRAM

```

343 IF X=4 THEN LET SS="A CARA
344 IF X=5 THEN LET SS="A GUARD"
345 IF X=6 THEN LET SS="A WIZARD"
346 IF X=7 THEN LET SS="YOUR MZ
347 IF X=8 THEN LET SS="A PRIEST"
348 IF X=9 THEN LET SS="A TREE"
349 IF X=10 THEN LET SS="SUPERH
350 IF X=5 OR X=10 THEN GOTO 10
351 IF X=9 THEN GOTO 1300
352 SCROLL
353 PRINT "YOU HAVE FOUND " : SS
354 SCROLL
355 PRINT "WELL YOU."
356 SCROLL
357 PRINT "FIGHT,RUN OR BRISST"
358 SCROLL
359 PRINT "INPUT F,R OR S"
360 INPUT US
361 IF US="F" AND F=1 THEN GOTO
362 IF US="F" THEN GOTO 500
363 IF US="R" THEN GOTO 800
364 IF US="S" THEN GOTO 1000
365 SCROLL
366 PRINT "HOW MUCH WILL YOU BR
367 INPUT B
368 LET B=INT (RND*100)+1
369 IF B=0 THEN GOTO 400
370 SCROLL
371 IF B=0 THEN PRINT "PHEW, YOU
372 GOT OUT OF THAT."
373 IF B=0 THEN SCROLL
374 IF B=0 THEN PRINT "YOU DREA
375 TED TO FLEE, YOU'RE JUST
376 A LITTLE BIT SCARED."
377 IF B=0 THEN PRINT "INSULTED
378 THAT MONSTER, IT'S A TAKEN
379 IF B=0 THEN SCROLL
380 IF B=0 THEN PRINT "EUREKA."
381 IF B=0 THEN LET P=F+R
382 IF B=0 THEN LET P=F+R+(100-R)
383 GOTO 700
384 LET B=INT (RND*100)+1
385 IF B=0 THEN GOTO 500
386 SCROLL
387 PRINT "THIS MONSTER HAS F.O
388 GOTO 700
389 SCROLL
390 PRINT "POINTS, HOW MANY WILL
391 YOU USE?"
392 INPUT US
393 SCROLL
394 LET B=INT (RND*7)+1
395 IF B=0 THEN SCROLL
396 IF B=0 THEN PRINT "C.S. HERO
397 AND TOLD YOU "T HELP."
398 SCROLL
399 LET T=INT (RND*100)+1
400 IF T=0 THEN GOTO 500
401 PRINT "IT ALSO HAS E,T,."
402 INPUT M
403 LET M=INT (RND*2)+1
404 LET M=INT (RND*100)+1
405 SCROLL
406 IF M=100-U AND Q=1 THEN PRI
407 NT "YOU SURE ARE KEET."
408 IF Q=1 THEN SCROLL
409 IF M=100-U AND Q=2 THEN PRI
410 NT "OR HE-HA, DOB "T YOU DOB
411 IF M=100-U THEN LET P=F+R
412 IF M=0 AND M=100-U THEN PRI
413 NT "THAT MONSTER GAVE YOU A DIRT
414 SCROLL
415 IF M=0 AND M=100-U THEN PRI
416 NT "KICK AND STOLE SOME MONEY."
417 IF M=0 AND M=100-U THEN LET P
418 SCROLL
419 IF M=0 THEN SCROLL
420 IF M=0 THEN PRINT "THAT MON

```

```

STER CRASHED YOU."
421 IF M=0 THEN GOTO 3000
422 LET M=5-U
423 SCROLL
424 GOTO 300
425 LET M=INT (RND*2)+1
426 LET M=5-10
427 SCROLL
428 IF M=1 THEN PRINT "YOU ARE
429 CONFERRED, YOU CAN ONLY"
430 IF M=1 THEN SCROLL
431 IF M=1 THEN PRINT "FIGHT NO
432 M."
433 IF M=1 THEN GOTO 500
434 SCROLL
435 PRINT "YOU GOT AWAY."
436 GOTO 300
437 LET M=INT (RND*100)+1
438 SCROLL
439 PRINT SS
440 SCROLL
441 PRINT "HAS CARRIED YOU UP "
442 SCROLL
443 PRINT "TOWARD THE"
444 GOTO 300
445 SCROLL
446 PRINT "YOU HAVE FOUND A TREE
447 SCROLL
448 PRINT "LUCKY YOU, BLUES E
449 SCROLL
450 PRINT "HAVE A FIRST, AND IMP
451 SCROLL
452 PRINT "STRENGTH AT THE SAME
453 TIME"
454 LET M=5-U
455 GOTO 300
456 SCROLL
457 SCROLL
458 SCROLL
459 SCROLL
460 SCROLL
461 PRINT "WANT TO TRY AGAIN? (
462 Y/N)"
463 SCROLL
464 LET Q=INT (RND*2)+1
465 IF Q="Y" THEN CLS
466 IF Q="Y" THEN GOTO
467 IF Q="N" THEN PRINT "OK, BY
468 E"
469 IF Q="Y" THEN GOTO 3000
470 STOP
471 SCROLL
472 PRINT "WELL DONE, YOU HAVE R
473 EACHED THE
474 SCROLL
475 PRINT "TOP OF THE CASTLE, YO
476 U HAVE FOUND"
477 SCROLL
478 PRINT "THE LOOT, YOU FINISHE
479 D YOUR QUEST"
480 SCROLL
481 PRINT "WITH " : S : " POWER POI
482 NT LEFT, AND"
483 SCROLL
484 PRINT "E,F, : LEFT"
485 SCROLL
486 PRINT "SUPREME RICHES ARE Y
487 OURS."
488 GOTO 3000
489 SCROLL
490 PRINT "YOU HAVE RUN OUT OF
491 POWER, POINTS"
492 SCROLL
493 PRINT "YOU ARE DEAD"
494 GOTO 3000
495 SCROLL
496 PRINT "YOU HAVE RUN OUT OF
497 COUGH, TUGH"
498 SCROLL
499 PRINT "LUCK."
500 SCROLL
501 PRINT "NO MORE BRIBING FOR
502 ME, T"
503 RETURN
504 CLS
505 PRINT "STEVE"
506 RUN

```

Hit the jackpot!

Andrew Bird's fruit machine game gives you the chance to gamble with your holiday money without hurting your pocket



This game is based on the fruit machines which are a familiar sight to everyone. The only difference with this program is that you don't have to risk any money to make yourself

The object of the game is to obtain a top which has either two or three fruit characters the same in order to win. It's a lot more realistic than normal fruit machines however since each go costs 0.

You are asked to put your holiday money and you must decide how much of it you are prepared to risk on the game. If you have a lot you can forget about real-life days as a sun-baked beach!

There are only two keys to be used with this program. They are **space** — for each go, and **0** — to end the game when you think that your winning streak is running out.

How it works

0-34 variable cost
35-100 coin game
101-300 enter money for each go
301-1000 fruit machine's spinning and wheel stopping
1001-1500 check the winning top
1501-2000 pay out for win
2001-4000 end of game routine
4001-4500 pull lever routine
4501-4900 lose all money routine
4901-5000 start/stop
5001-5000 graphics

Variables

costs your money
win amount for winning top
fl fruit character
g5 instructions for each go
flint, flint 0 with roller, top
top of top
top a place which fruit displayed
p used to indicate pay out routine
l used in general purpose loops
top position of money placed
top



Listing

```

1 REM Jackpot By A.G.Bird
2 PRINT AT 10,10:"Please Wait": POKE 23609,30
3 GO SUB 9000
4 GO SUB 7000
5 LET win=0
6 RANDOMIZE
10 LET i=-RANDOM*PCENFAR/____$HF130,"
12 LET g$="" :PRESS "SPACE" FOR NEXT GO .. OR 101 TO END "
15 DIM i(21): DIM a(21)
20 LET i(1)=2: LET i(5)=3: LET i(9)=4: LET i(13)=5: LET i(17)=6: LET i(21)=7
24 FOR f=1 TO 9: LET a(f)=i NEXT f
26 FOR f=13 TO 21: LET a(f)=5: NEXT f
28 REM Draw game
30 PLOT 1,7: DRAW 0,15: DRAW 15,15: DRAW 50,0: DRAW 15,-15: DRAW 0,-15: DRAW
-10,0
40 DRAW 15,24: DRAW -0,44: DRAW 0,49: DRAW 94,0: DRAW 0,-49: DRAW -8,-44: DRAW
15,-24: DRAW 0,-7: DRAW -10,0: DRAW 0,7
50 PLOT 18,32: DRAW 60,0: PLOT 8,90: DRAW 94,0: DRAW -14,14: DRAW -48,0: DRAW
-14,-14
60 PLOT 8,144: DRAW 14,-14: DRAW 60,0: DRAW 14,14
70 PLOT 22,109: DRAW 0,20: PLOT 43,109: DRAW 0,20: PLOT 68,109: DRAW 0,20: PLO
T 7,09: DRAW 0,20
80 FOR f=32 TO 60 STEP 12: PLOT f,40: DRAW 0,32: NEXT f
90 PRINT AT 1,3: BRIGHT 1: INK 4:"SPECTRUM":AT 3,3:"JACKPOT"
100 PLOT 112,44: DRAW 18,0: DRAW 0,80: DRAW -8,0: DRAW 0,-72: DRAW -8,0
110 INK 4: PLOT 150,1: DRAW 0,173: DRAW 94,0: DRAW 0,-173: DRAW -94,0
120 INK 6: PRINT AT 1,22:"JACKPOT":AT 3,22:"By":AT 5,22:"A.G.Bird"
130 PRINT AT 4,3: INK 5:"AB":AT 4,4:"AB":AT 4,5:"AB":AT 7,3:"____":AT 7,4:"____"
14 T 7,9:"____"
140 PRINT AT 10,22: BRIGHT 1: INK 5:"YOU HAVE":AT 12,24:"$":cash
150 PRINT AT 18,23: INK 7: FLASH 1:"PRESS":AT 20,23:"SPACE"
160 REM Main loop
200 IF INKEY$=" " THEN GO TO 4000
208 IF INKEY$=" " THEN GO TO 200
210 PRINT AT 18,23:" " :AT 20,23:" "
220 LET cash=cash+1
230 PRINT AT 12,24: BRIGHT 1: INK 5:"$":cash
238 GO SUB 3000
240 GO SUB 1000: GO SUB 3000
250 IF win=0 THEN GO SUB 3000
260 IF win=0 THEN FOR f=1 TO 50: NEXT f: GO TO 400
270 LET cash=cash*win
280 PRINT AT 12,25: BRIGHT 1: INK 5:cash
290 PRINT AT 18,22: INK 1:1: BRIGHT b(1):f(1): TO x(1):AT 17,22:f(1)+2 TO x(2)
300 PRINT AT 18,23: INK 1:1: BRIGHT b(1):f(1): TO y(1):AT 17,23:f(1)+3 TO y(2)
310 PRINT AT 18,24: INK 1:1: BRIGHT b(1):f(1): TO x(1):AT 17,24:f(1)+2 TO x(2)
320 PRINT AT 19,23: INK 4:"$":cash
330 FOR f=20 TO 30: BEEP .02,f: BEEP .02,f+5: BEEP .02,f+10: BEEP .02,f+15: PAU
SE 4:8: NEXT f
340 FOR f=1 TO 300: NEXT f
350 FOR f=16 TO 30: PRINT AT f,22:" " :NEXT f
360 FOR f=10 TO 30: PRINT AT f,21:" " :NEXT f
400 IF cash=0 THEN GO TO 5000
410 FOR f=1 TO LEN g$-9: PRINT AT 18,21: INK 7:g$(f TO f+9): BEEP .07,f+50: NEXT
f
500 GO TO 300
999 REM Prust machine working
1000 LET x=CINT (RANDOM*1+4+1)
1005 IF RAND>.50 THEN LET y=0 GO TO 1015
1010 LET y=CINT (RANDOM*1+4+1)
1015 IF RAND>.70 THEN LET z=y: GO TO 1040
1020 LET x=CINT (RANDOM*5+2+4+1)
1040 FOR n=1 TO 15
1050 PRINT AT 4,3: INK RAND*7:"BB":AT 4,4: INK RAND*7:"BB":AT 4,9: INK RAND*7:"BB"
1060 PRINT AT 7,3: INK RAND*7:"BB":AT 7,4: INK RAND*7:"BB":AT 7,9: INK RAND*7:"BB"
1070 BEEP .01,-20: NEXT n
1080 PRINT AT 4,3: INK 6:1: BRIGHT b(1):f(1): TO x(1):AT 7,3:f(1)+2 TO x(2)

```


PROGRAM

```

1090 BEEP .03,-10
1095 FOR n=1 TO 15
1100 PRINT AT 4.4: INK RND+7;"00";AT 4.9: INK RND+7;"00"
1120 PRINT AT 7.4: INK RND+7;"00";AT 7.9: INK RND+7;"00"
1130 BEEP .01,-200 NEXT n
1140 PRINT AT 4.4: INK 1;Y: BRIGHT 1;Y+1;Y TO Y+1;AT 7.4:Y+1;Y+2 TO Y+3:
1150 BEEP .03,-5
1155 FOR n=1 TO 15
1160 PRINT AT 4.9:RND+7;"00";AT 7.9;"00"
1170 BEEP .01,-200 NEXT n
1180 PRINT AT 4.9: INK 1;X: BRIGHT 1;X+1;X TO X+1;AT 7.9:Y+1;Y+2 TO Y+3:
1190 BEEP .03,0
1200 RETURN
1999 REM Check for win
2000 IF x<>y THEN LET win=0: RETURN
2010 IF x=0 THEN GO TO 2100
2020 IF x=1 THEN LET win=3
2030 IF x=5 THEN LET win=4
2040 IF x=9 THEN LET win=2
2050 IF x=13 THEN LET win=5
2060 IF x=17 THEN LET win=3
2070 IF x=21 THEN LET win=4
2080 RETURN
2100 IF x=1 THEN LET win=6
2110 IF x=5 THEN LET win=10
2120 IF x=9 THEN LET win=6
2130 IF x=13 THEN LET win=30
2140 IF x=17 THEN LET win=9
2150 IF x=21 THEN LET win=9
2160 RETURN
2999 REM Money
3000 FOR g=1 TO win
3010 LET m=INT (RND+31)+10
3020 LET n=INT (RND+10)+2
3040 IF ATTR (m,n)=70 THEN GO TO 3020
3050 PRINT AT m,n: INK 4: BRIGHT 1;"T"
3060 BEEP .02,50: BEEP .02,60: BEEP .04,50: PAUSE 3
3070 NEXT g
3080 RETURN
3999 REM Finish
4000 BORDER 4: PAPER 4: INK 0: CLS
4010 PRINT " YOU HAVE ENDED UP WITH #";cash"" Press any key for another go"
4020 FOR i=0 TO 30 STEP 2: BEEP .03,i: BEEP 4/100,i+10: NEXT i
4030 PAUSE 5: GO TO 4
4999 REM Lever
5000 INK 7: OVER 1: PLOT 112,64: DRAW 14,0: DRAW 0,80: DRAW -8,0: DRAW 0,-72: DR
AW -8,0
5010 BEEP .03,-30
5010 FOR i=0 TO 1: OVER 1: PLOT 112,64: DRAW 14,0: DRAW 4,60: DRAW -8,0: DRAW -4
,-60: DRAW -8,0: NEXT i
5015 BEEP .03,-30
5020 FOR i=0 TO 1: OVER 1: PLOT 112,64: DRAW 14,0: DRAW 0,80: DRAW -8,0: DRAW -8
,-60: DRAW -8,0: NEXT i
5025 BEEP .03,-30
5030 OVER 0: PLOT 112,64: DRAW 14,0: DRAW 0,80: DRAW -8,0: DRAW 0,-72: DRAW -8,0
5100 RETURN
5999 REM Lost
6000 BORDER 0: PAPER 0: INK 0: CLS
6010 PAPER 7: INK 1: PRINT AT 3,0:" END LUCK "AT 5,0:" YOU HAVE JUST RUN OUT OF
MONEY "
6020 FOR i=30 TO 0 STEP -1: BEEP .01,i: BEEP .02,i-5: BEEP .03,i-10: BEEP .04,i-
15: NEXT i
6030 PAUSE 500: GO TO 4
6999 REM Instructions
7000 BORDER 4: PAPER 4: INK 0: CLS
7010 PRINT PAPER 1: INK 7:" JACKPOT By A.S.Ward, 1984 "
7020 PRINT AT 3,3:"You are on holiday and, being""a bit of a gambler, you deci
de""to tackle a one armed bandit in""the nearby Amusement Arcade.""Each go
costs $1 so how much of""your holiday money do you want""to play"

```

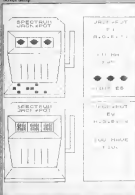
SPECTRUM PROGRAM

```

7030 FOR d=0 TO 4: PLST 11+=d,44: SWAP 10,-10,-70: SWAP 0,-24: NEXT d
7040 INPUT " " : GOTO 7100 IF CONTINUED THEN GO TO 7040
7050 BORDER 0: PAPER 0: INK 7: CLS : PRINT PAPER 7: INK 0: SPECTRUM JACK+POT M
JACKING LINE#
7060 FOR d=1 TO 7 STEP 3: GO SUB 7100: NEXT d
7070 FOR d=0 TO 22 STEP 3: GO SUB 7100: NEXT d
7080 GO TO 7100
7100 PRINT AT 3,4: INK 3: "AB":AT 3,4: ""
7110 PRINT AT 5,4: INK 3: BRIGHT 1: "OR":AT 5,4: "OF"
7120 PRINT AT 8,4: INK 7: "12":AT 8,4: "13"
7130 PRINT AT 11,4: INK 4: "OH":AT 12,4: "OP"
7140 PRINT AT 14,4: INK 3: BRIGHT 1: "OM":AT 15,4: "ON"
7150 PRINT AT 17,4: INK 4: BRIGHT 1: "OD":AT 18,4: "OF"
7160 RETURN
7180 PRINT AT 3,13: "OR":AT 4,13: "10":AT 5,13: "B":AT 12,13: "B":AT 19,13: "4":AT 19,
13: "6"
7190 PRINT AT 3,20: "B":AT 4,20: "4":AT 9,20: "4":AT 12,20: "2":AT 19,20: "2":AT 19,2
0: "2"
7200 PRINT AT 21,0: "Press any key to start the game." : PAUSE 0: CLS : RETURN
9999 REM Graphics
9999 FOR g=0 TO 4095: READ r: POKE g,r: NEXT g: RETURN
9999 DATA 255,0,255,144,255,147,144,255,255,0,147,73,73,255,73,73
9999 DATA 0,3,15,31,31,63,63,63,0,192,240,240,240,255,255,255
9999 DATA 63,31,31,15,3,0,0,0,255,240,240,240,192,0,0,0
9999 DATA 0,3,15,31,31,127,255,127,0,192,240,240,240,255,255,255
9999 DATA 0,0,0,0,3,15,255,255,0,3,15,255,255,255,255,255
9999 DATA 127,63,31,15,31,99,97,0,240,240,255,255,192,192,192,192
9999 DATA 255,63,127,1,0,0,0,0,0,24,63,127,128,128,128,128
9999 DATA 12,30,30,12,1,3,3,1,120,120,120,120,192,192,192,192
9999 DATA 30,31,1,1,97,243,243,97,240,0,0,0,124,207,207,124
9999 DATA 30,31,0,1,97,97,97,0,31,0,60,124,124,124,124,60,0

```

Table 1



JINGLES MAIL ORDER

SALDO **SALDO** **SALDO**

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 (617) 552-1100 FAX (617) 552-1101

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ORDER NOW! PLA'S (10¢) 4 LARGER SIZE

Use all your wits to rule the kingdom and keep maurauding invaders at bay. You must be wily and cunning in this game by Marc Cawthorne

You're the king of the castle

You're the king and you have all the power. You must choose how many men will work in the fields, on the dyke and protect your village. Be careful though — your decisions may cause the dyke to flood or bandits may come down from the mountains. There's also a chance that

you'll get invaded by your neighbouring country. This game has mixed text and graphics.

How it works
16-B, no variables
128-655 words for jobs
288-1024 graphics, main program

How it works
16-B, no variables
128-655 words for jobs
288-1024 graphics, main program

How to overcome
As the Dragon's language is fairly standard, conversion should be quite simple.

Variables
P: year
R: population
F: area
FD: dyke up/dn
FC: fortress
FB: goods
FY: soldiers
DY:ALVA: check for invasion

```

10 CLS:PRINT#224,"THE KINGDOM OF SHELLIDGE.....":SCREEN 0,1:FOR#1 TO1000:NEXT
  1
20 CLS
30 SOUND#200
40 H=1274
50 R=12500:ORND(11.75):P=100
60 F=1134
70 DY=0:FB=0
71 FC=0
80 RB#
90 F=F+1:IF F=1170 THEN L390
100 SOUND#200
110 FOR#145 TO170:SOUND#,1:NEXT#
120 CLS:PRINT#0,"          "P:PRINT#0,"KINGDOM"
130 PRINT"YEAR IS "F;:PRINT
140 PRINT"DEATHS FROM FAMINE "FC
150 PRINT"DEATH FROM FLOODS "FB
160 PRINT"DEATH FROM BANDITS "FCB
170 PRINT:P:PRINT"POPULATION "R
180 PRINT"MASS OF GOLDEN "F
190 PRINT"*****"
200 PRINT"      DISTRIBUTION OF LABOUR"
210 PRINT"YOU MUST USE AT LEAST ONE:P:PRINT"PERSON FOR EACH JOB."
220 PRINT"POPULATION "F
230 INPUT"WORK UP/DOWN":FD:SOUND#,1
240 INPUT"FARMERS":FC:SOUND#20,1
250 INPUT"GUARDS":FB:SOUND#0,1
260 IF FD =0 AND FC=0 OR FD=0 THEN CLS:PRINT#74,"YOU MADE A MISTAKE.":PRINT"YOU
  MUST USE AT LEAST ONE:P:PRINT"PERSON FOR EACH JOB." :GOTO190
270 F=F-(FC+FB+FD)
280 IF F<0 THEN FD=0 AND FC=0 AND FB=0:CLS:PRINT:PRINT"YOU MADE A MISTAKE":PRINT
  :GOTO190
290 PRINT"SOLDIERS= "FPA
300 FPA=1 TO1000:NEXT#1:CLS
310 SOUND#200
320 SOUND#70
330 GOTO100
340 DY=0:FB=0:FC=0
350 V1=(R/F)+100:IF V1=0 THEN F=1
360 V2=(R/F)+100
370 IF V1>10 AND V2<15 THEN V1
380 RETURN
  
```

```

390 PRINTB70;"          ";:PRINTB70;"SWARMION";:FORT=170:GOTO STEP25:GOTOB7,4:NEXT
400 FORA1=170:GOTO NEXTA1
410 GOTO STEP32:POKEP,170:NEXTP:FORP=1824:TO(1847-38):STEP32:POKEP,170:NEXTP
420 FORP=1825:TO1834:STEP32:POKEP,171:POKEP,170:POKEP+32,171:POKEP+32,170:NEXTP
430 FORP=(1824+32):TO(1835-7):STEP64:POKEP,111:NEXTP:FORP=(1824+32):TO(1835-4):STEP64
440 POKEP,92:NEXTP:FORP=(1824+32):TO(1835-4):STEP64:POKEP,111:NEXTP:FORP=(1824+29):TO
450 1835-3:STEP64:POKEP,92:NEXTP
460 FORP=1824:TO1837:STEP32
470 POKEP-1,249:POKEP,249:POKEP+1,249:POKEP+32,249:POKEP+32,249:POKEP+32,249
480 POKEP-1,287:POKEP,287:POKEP+1,287:POKEP+32,287:POKEP+32,287:POKEP+32,287
490 NEXTP
500 POKEP-1,249:POKEP,249:POKEP+1,249:POKEP+32,249:POKEP+32,249:POKEP+32,249
510 GOTO 1840
520 FORA1=1840:GOTO NEXTA1
530 IF PA1)=1A1 THENGOTO
540 FORP=(1824+32):TO(1837):STEP32:POKEP,255:POKEP,287:NEXTP:POKEP,255
550 P=(1322:POKEP,255:POKEP+32,255:POKEP+32,255:POKEP-1,255:POKEP+1,255
560 FORT=1840:GOTOSTEP25:GOTOB7,3:NEXTT
570 PRINTB120;"YOU WERE DEFEATED "
580 PLAY"65550"
590 FORA1=170:GOTO NEXTA1:GOTO 331
600 PRINTB120;" YOUR ARMY NOW:"
610 GOTO 1840:GOTO 170
620 PRINTB170;"GOLDENERS LOST=";:G
630 PLAY"64550"
640 R=R-50:PA=0
650 IF R=0 THEN R=0
660 FOR A1=170:GOTO NEXTA1:RETURN
670 FOR
680 FOR
690 FOR
700 FOR
710 FOR
720 FOR
730 FOR
740 FOR
750 FOR
760 FOR
770 FOR
780 FOR
790 FOR
800 FOR
810 FOR
820 FOR
830 FOR
840 FOR
850 FOR
860 FOR
870 FOR
880 FOR
890 FOR
900 FOR
910 FOR
920 FOR
930 FOR
940 FOR
950 FOR
960 FOR
970 FOR
980 FOR
990 FOR

```

PROGRAM

```

940 FOR I=1340 TO 1350:RND(17);:POKET,175:NEATT
940 PORT=1702550:NEATT
940 RETURN
940 M=RND(11)+3
940 CA=RND(11)+4+5
940 L=CA+PC+MP
940 AQ=(1+(R+21)/PB*(1+CA*(1)+*20)
940 IFPC=0 THEN 1360
940 F=4-(AQ+1)/100
940 OF=(1+(R+3.142*(21)/P)/1000)+R
940 IFPC=0 THEN OF=0
940 IFDC=0 THEN OF=0
940 IFDC=0 THEN OF=0
940 OFD=1 THEN 000
940 OF=INT(12*RND(112))
940 RA=INT(CND(11)+10)+1
940 IF CA=0 THEN OF=0
940 IFCA=0 THEN 1320
940 OF=(CND/100)+R
940 OF=INT(OF);OF=INT(OF);OF=INT(OF);F=INT(OF)
940 P=0-OF*(OF+OF)
940 IFPC=0 THEN 1360
940 IFPC=2 THEN 1360
940 IFDY=0 THEN P=P+(CND(11,10))
940 R=R+(INT(10/(RND(7))))
940 RETURN
940 IF=0 THEN 1320
940 0001360
940 CLS
940 PRINT"*****"
940 PRINT" THE KINGDOM OF GHELLINGE":PRINT" *****";PRINT:
940 PRINT"YOU ARE THE RULER OF A SMALL ";PRINT"KINGDOM,YOU CONTROL THE LOCAL"
940 PRINT"WOODS AND THE ARMY.";PRINT;PRINT"DISTRIBUTE THE POPULATION";PRINT;PRINT"
940 PRINT"*****"
940 PORT=10255 STEP20;SOUND,3;NEATT
940 FOR=1702550:NEATT
940 RETURN
940 CLS;PRINT$74,"YOU PEOPLE HAVE "
940 PRINT$86,"BEEN WIPED OUT."
940 PORT=10255STEP20;SOUND,3;NEATT
940 FOR=1702550:NEATT
940 M=Y
940 PRINT;PRINT" YOU REINED FROM";PRINT" 1134 UNTIL ";M
940 PRINT;PRINT;PRINT"AND/OR OF(Y/N)"
940 AA=INKEY$:IF AA=""THEN 1350:IFAA="M"THEN END
940 IF AA="Y" THEN 40
940 IF AA="Y" AND AA="M" THEN1350
940 END
940 CLS;PRINT$74,"YOU GED OF OLD AGE"
940 PORT=1702550STEP20;SOUND,4;NEATT
940 0001340
940 CLS;POKE1326,120;POKE1357,120;POKE1290,120;POKE1356,120;FORP=1800 TO1306:
940 STEP32;POKEP,175;NEXTP;FORP=1800TO1337:STEP32;POKEP,175;NEXTP
940 FORP=1800 TO1834:STEP32;POKEP,175;POKEP,175;POKEP=32,175;NEXTP
940 FORP=1800TO1834STEP44;POKEP,131;NEXTP;FORP=1800 TO1827STEP44;POKEP,32;NEXTP
940 FORP=1800TO1831:STEP44;POKEP,131;NEXTP;FORP=1853TO1832STEP44;POKEP,93;NEXTP
940 FORP=1217TO1219+RND(11);STEP1;POKEP,175;NEXTP;PORT=1313TO(1318+RND(9));
940 P=POKET,175;PORT=1281TO(1282+RND(8));:POKET,175;NEXTP;PORT=1343TO(1348+RND(6));P
940 PORT,175;NEXTT
940 OF=(15+RND(10));
940 OF=0
940 F=F+(RND(3))
940 R=R-(OF+OF+OF)
940 IFPC=0 THEN 1360
940 000000
940 F=F+(RND(1))
940 R=R+(INT(10/(RND(4))))
940 000070

```


Can you count? Oric 1 £5.95

Hellmuth, 25 Delford Court, Hallingwood, Wilton, Southampton.

Can you spell? Is an educational game for kids to use year-on-year by a class computer (called Microboard).

As soon as the program starts to load, you notice that it's special. This program actually has a title page. You only think this is trivial but three days, presents itself in a flasher to captivate in the young child.

When the main program is loaded the child is presented with three choices, a key to the town, money or words. When you choose, the appropriate picture is shown. The child is asked to count the number of objects (for example, if you choose options

one, you may be asked to count the number of blue cars, or in the case of about two, the number of sheep.

This may sound like other educational software for small children but this particular program has a real twist. The children's mission to graphical level, the three part learning menu and the small but important details such as a number input routine which doesn't require RETURN make this a very professional program.

Instructions	50%
Size of text	50%
Display	100%
Value for money	100%

★★★★

Can you Spell? Oric 1 £5.95

Hellmuth, 25 Delford Court, Hallingwood, Wilton, Southampton.

Can you Spell is an educational game for four to six-year-olds by a relatively new company called Hellmuth.

When the main program is loaded, a large picture of a child is shown to attract the child's attention. Then a three-part learning menu is played (year, age, name). The screen set up of a figure with a small but very carefully designed guide to the right hand edge and a menu at the top. There is a very detailed picture of an everyday object in front, as the to right hand corner.

The child is then asked to move a given number of letters and then the appropriate letter

for the name of this object. If the choice is correct the child collects the letter and delivers it to the screen which in turn moves to a box. This is done for each letter and then the name of the object is clearly built up.

This may sound like any other spelling game but this one is really special. The quality of graphics and icons played are superb and should help to keep the wandering attention of a young child.

Instructions	40%
Size of text	50%
Display	100%
Value for money	95%

★★★★

Junior Maths Pack Electron £5.95

Micro Power, Shopper Hall, 12 Shopper St. South, Leeds LS2 1AD.

If you are looking for a program that gives practice to some of the important areas of maths at a junior level you could do a great deal worse than take a part in this package.

The program actually loads itself onto all of which can be selected from the main menu.

The first is a basic junior aged, repeating speed of calculation in division to help the child to do division. You set the speed and difficulty and try to keep the child off the ground by answering questions as quickly as possible.

The second game uses grids and is an addition to search for answers. There are a number of variations of answer and help, in the form of arrows, if you require it. A good program but this type can be done very easily by paper and pen.

The final game is based on the first two and involves the making of number bonds. The code uses, you add or subtract numbers from the total shown in try to make the total match. All the programs for this type are for those very easily to paper and pen.

Instructions	70%
Size of text	80%
Display	40%
Value for money	70%

★★★★

Learning at home

Use your computer as an educational tool. These new software releases have been specially vetted for you

French on the Run BBC £5.95

Microboard, released for junior software has brought you this educational game for 12 Level French students. As expected, it uses multiple-choice type questions, in the form of an adventure game.

The programme takes the child into most grammatical tenses, vocabulary, idioms, phrases, comprehension and some knowledge of French. The programme is aimed at those interested in the main grammatical and lexical errors made by students at 12 Level.

What is the computer you are a British native and this does not mean English. You can select options and subsequently escape. In your efforts to make your way back to safety you only realise to look the last

people who unfortunately speak English too French.

The game consists of ten sections which all of increasing linguistic difficulty. As you move, you come up against numerous interesting points, trying things out in which you have to reply to questions in French or carry out actions described in French. You eventually arrive and find a Frenchman.

The whole game is quite well thought out and the graphics are interesting but not silly. I feel that the slow rate of progress was irritating but that does not stop me from recommending this game.

Instructions	60%
Size of text	80%
Display	60%
Value for money	70%

★★★★

European Knowledge Electron £5.95

Micro Power, Shopper Hall, 12 Shopper St. South, Leeds LS2 1AD.

Educational software for the Electron is rare to say the least. This is an exceptional package to test the knowledge of youngsters up to a range of ages concerned with Europe.

Using the excellent graphics capabilities of the Electron the main screen shows a multi-colored map of Europe with good accuracy and an attractive appearance.

The screen is then divided into three sections. The first presents answers and the child is enlarged map of the country with letters defined throughout and a pointer in the main map.

The questions, chosen at random, are presented in sets of four per country. They usually start with the name of the country and then branch out into a variety of questions. The capital might be requested, the name of a famous person from the country, the language or currency and even the names of large towns.

This variety is one of the notable features of the game and tends to make it much less boring. A good rate interest program with few faults from a good solid standard.

Instructions	75%
Size of text	95%
Display	95%
Value for money	90%

★★★★

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| 5 Beam-Head | U.S. Gold | Spectrum 11 |
| 6 Chivalry | Dave | Spectrum 11 |
| 7 Polystar | Miles-Gem | Spectrum 11 |
| 8 Makemon | U.S. Gold | Spectrum 11 |
| 9 Dragon Warrior
Spectrum 11 | Dragon vs. Golem | Spectrum 11 |
| 10 Blaxxon | U.S. Gold | OGM 64/68 |

NON-ARCADE

- | | | |
|--------------------------------|---------------|-------------|
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| 2 America | Miles-Gem | Spectrum 11 |
| 3 Titanic | Compton | Spectrum 11 |
| 4 Aviation | Hexage | Spectrum 11 |
| 5 Sensible | Lithium-Denon | Spectrum 11 |
| 6 Twain | Compton | Spectrum 11 |
| 7 Star Trek | OGM 11 | Spectrum 11 |
| 8 World Cup
Football | Miles-Gem | Spectrum 11 |
| 9 Hempstead | Amstrad | OGM 11 |
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| 6 Chivalry | Dave |
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DRAGON 32

- | | |
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| 3 Monty Mole | Greenin |
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| 6 Chivalry | Dave |
| 7 Polystar | Miles-Gem |
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Compiled by W. R. Smith and Websters. Figures in brackets are last week's positions.

VIC-20

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| 7 Polystar | Miles-Gem |
| 8 Makemon | U.S. Gold |
| 9 Dragon Warrior
Spectrum 11 | Dragon vs. Golem |
| 10 Blaxxon | U.S. Gold |

BBC

- | | |
|--|------------------|
| 1 Ball's Thunder
DECISION | Odin |
| 2 Jet Set Willy | 1-Project |
| 3 Monty Mole | Greenin |
| | Chaplin |
| 4 Mind Miner | 1-Project |
| 5 Beam-Head | U.S. Gold |
| 6 Chivalry | Dave |
| 7 Polystar | Miles-Gem |
| 8 Makemon | U.S. Gold |
| 9 Dragon Warrior
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AMSTRAD

- | | |
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[illegible]

Boys' club, parents, and jargon, to trade between the two sides of the Canal Islands. Make a list of the words and (using all you know) try to guess the meaning, using context and etymology. A slightly-subversive game with graphics like this:

Following its inception, *and-1* circulated in the highest of price and mass book-give-away bags back in the 1970s with the aid of parents and religious bookstores. Unlike most other Black Horrors in Queens, the *Dragon and Knight of the Mountain* has the Black Cat of Carver's & Cooley, the *Witch of Southampton* and other talents. A previously unknown, but still a machine made of steel.

There are two *de novo* mutation rates: (1) *de novo* mutation rate per nucleotide per generation (10⁻⁸ to 10⁻⁹) and (2) *de novo* mutation rate per gene per generation (10⁻⁶ to 10⁻⁷). The *de novo* mutation rate per nucleotide per generation is the most commonly used measure of the *de novo* mutation rate. It is calculated by dividing the number of *de novo* mutations by the number of nucleotides sequenced and the number of generations. The *de novo* mutation rate per gene per generation is calculated by dividing the number of *de novo* mutations by the number of genes sequenced and the number of generations. The *de novo* mutation rate per nucleotide per generation is the most commonly used measure of the *de novo* mutation rate.

2.1.1. *Hardware and software on laboratory cartridges as a part of 2d Major work*
cartridge = the pair of such programs on above chip (1 + 1 = cartridge with
Treatment and Index Table would be (1,1) 2d. As a **part** of 2d, **Cartridge** (which's
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42) *spenceri* moved the boundary, from the August 1, 1980 date to 1981.

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Architecture	100%	100%	100%
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Public Relations	100%	100%	100%
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Food & Beverage	100%	100%	100%
Retail	100%	100%	100%
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Architecture	100%	100%	100%
Design	100%	100%	100%
Consulting	100%	100%	100%
Advertising	100%	100%	100%
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Telecommunications	100%	100%	100%
Food & Beverage	100%	100%	100%
Retail	100%	100%	100%
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Technology	100%	100%	100%
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Architecture	100%	100%	100%
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Food & Beverage	100%	100%	100%
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 an... and not all enough sharing the
 the... for you. (10/1/1)

Fish Report: Harvest by Todd
Shannon, Mid Fire Canyon Rd.
Largest Trout: 16 inches / 7 lbs

Original Advertising The ad maker designed the CBS station's recent series of "Wood" tie-in commercials featuring the actor, which tell a full story about the company's history. **Media** In addition to airing the spots, CBS programmed an "Adweek" for the station's subscribers last week.

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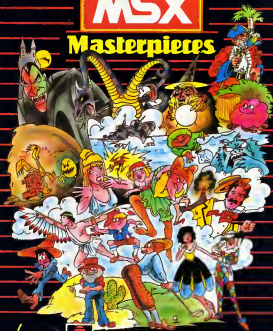
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